



## PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 05-861)

In the Application of:	)	
	)	
Haskell	)	Art Unit: Unknown
	)	
Serial No.: 10/553,308	)	
	)	
Filed: October 14, 2005	)	Examiner: Not Assigned
	)	
Title: Phased Array Antenna System with Adjustable Electrical Tilt	)	
	)	

### **Statement of Relevancy of a Foreign Language Reference**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The JP 61172411 reference was cited in an Opposition of European patent application EP 1 239 534 by Radiation Y Microondas, S. A. The reference was cited as disclosing “a multi-stage linear array antenna which pretends to increase the beam tilting effect by setting the first phase shifter for each exciting elements so as to give a beam tilting angle larger than a required value and obtaining a required beam tilting angle by the combined phase shift by the first and second phase shifters so as to reduce a side lobe level produced during prorogation.”

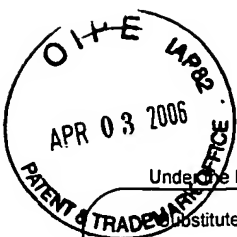
The Okuyama et al. reference was cited in an Opposition of European patent application EP 1 239 534 by Radiation Y Microondas, S. A. The reference was cited as disclosing “a base station antenna products that integrate technologies for beam forming, wind-load shedding and beam tilting. Its drawings show antenna structures serving 120° sectors and phase shifting arrangements.”

Respectfully submitted,  
McDONNELL BOEHNEN HULBERT &  
BERGHOFF LLP

Dated: March 30, 2006

By:

A. Blair Hughes  
Reg. No. 32,901



Institute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1

of 6

**Complete if Known**

Application Number	10/553,308
Filing Date	October 14, 2005
First Named Inventor	Haskell
Art Unit	Unknown
Examiner Name	Not Assigned
Attorney Docket Number	05-861

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
		us- 2,041,600	5-19-36	Friis	
		us- 2,239,775	3-2-39	Bruce	
		us- 2,245,660	10-12-38	Feldman et al.	
		us- 2,247,666	8-2-39	Potter	
		us- 2,961,620	11-22-60	Sommers	
		us- 3,277,481	10-4-66	Robin et al	
		us- 3,522,558	1-13-69	Stafford et al.	
		us- 4,241,352	12-23-80	Alspaugh et al	
		us- 4,249,181	2-3-81	Lee	
		us- 4,788,515	11-29-88	Wong et al.	
		us- 4,881,082	11-14-89	Graziano	
		us- 5,281,974	1-25-94	Kuramoto et al.	
		US-			
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**FOREIGN PATENT DOCUMENTS**

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		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)				
		WO 89/07837	8-24-89	Wong et al.		
		WO 92/16061	9-17-92	Kangas		
		WO 93/15569	8-5-93	Franza et al.		
		WO 95/10862	4-20-95	Butland et al.		
		EP 0 531 090	3-29-00	Fujil et al.		

Examiner  
SignatureDate  
Considered

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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

*(Use as many sheets as necessary)*

Sheet 2

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## U. S. PATENT DOCUMENTS

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		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)				
		EP 0 575 808	12-29-93	Hadzoglou et al.		
		GB 1 314 693	4-26-73			
		AU 38746/93	7-29-93	Butland et al.		
		AU 664625	11-23-95	Mews		
		JP 02-174302 - abstract	7-5-90	Nippon Telegraph		

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Signature**

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Sheet **3** of **6**

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		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)				
		JP 04-320121 abstract	11-10-92	Nippon Telegraph		
		JP 04-320122 abstract	11-10-92	Nippon Telegraph		
		JP 05-37222	2-12-93	NEC Corp		X
		JP 05-075340	3-26-93	Hitachi Chem Co.		
		JP 05-121902	5-18-93	Nippon Dengiyou		

Date  
Considered

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Sheet **4** of **6**

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		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)				
		JP 05-121915	5-18-93	Sumitomo Electric		
		JP 61-172411	8-4-86			
		JP 61-006901	1-13-86	Kokusai Denshin		X
		JP 140985	5-20-94	Fujitsu Ltd		X
		JP 06-196927	7-15-94	NTT Idou Tsuushinmou		X

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Sheet 5 of 6

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		Country Code <sup>3</sup> "Number" <sup>4</sup> "Kind Code" <sup>5</sup> (if known)				
		JP 06-260823	9-16-94	Mitsubishi Electric		X
		JP 06-326501	11-25-94	Sumitomo Electric		X

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Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>	
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		Filing Date	October 14, 2005
		First Named Inventor	Haskell
		Art Unit	Unknown
		Examiner Name	Not Assigned
Sheet 6	of 6	Attorney Docket Number	05-861

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Strickland, Peter "Microstrip Base Station Antennas for Cellular Communications", IEEE, pp. 166-171 (1991)	
		Bacon, "Variable Elevation Beam-Aerial Systems for 1 1/2 Metres", Journal IEE, pp. 539-544 (1946)	
		Forster, et al. "A Conical Beam Ship Array Antenna with Infinitely Variable Control of the Elevation Angle", pp. 17-20 (1973)	
		Hansen, "Microwave Scanning Antennas" Vol. 3 Array Systems, pp. 2-7 (1966)	
		Smith, textbook: "Circuits, Devices and Systems", A First Course in Electrical Engineering", 4 <sup>th</sup> Ed., pp. 680-681 (1984)	
		Okuyama et al., "Base-Station Antenna Systems for Car and Handheld Cellular Phones", Mitsubishi Denki Giho, Vol. 68, no. 12, pp. 23-26 (1994)	
		Sumitomo Technical Review, September (1993)	X
		Brochure, "Brown Boveri Phaser for the Horizontal Slewing of Curtain Antennas", Boveri & Cie AG, Mannheim, RFA Classif. n° 1601/242	
		CEL-901 Cellular Antenna Controller User's Manual", issued on 2 April 1992, in the name of CAL Corporation (1991)	

Examiner Signature	Date Considered
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